Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Canceled)

2.   (Canceled)

3.   (Currently Amended) ~~The method of claim 2~~ A method for assisting capacity planning in a network having a plurality of links, said method comprising the steps of:

determining spare capacity on at least one link of the network, where said spare capacity is representative of an existing capacity plus an augmented capacity minus a bandwidth of all circuits routed on said at least one link of the network;

computing an overall cost in accordance with said spare capacity for provisioning a circuit on said at least one link of the network, wherein said computing step comprises:

minimizing ~~an objective~~ a function of $\Sigma c_j x_j - \Sigma s_j b_j$ to obtain said overall cost, where s_j represents said spare capacity for a link j, where b_j represents said benefit weight for said link j, where x_j represents said augmented capacity for said link j, and where c_j represents a cost for said link j; and applying a benefit weight to said spare capacity.

4.   (Currently Amended) The method of claim 3, further comprising:
applying run integer programming to said ~~objective~~ function.

5.   (Currently Amended) The method of claim 3, further comprising:
applying simulated annealing to said ~~objective~~ function.

6.   (Canceled)

7.   (Currently Amended) ~~The method of claim 6~~ A method for assisting capacity planning in a network having a plurality of links, said method comprising the steps of:

determining spare capacity on at least one link of the network, where said spare capacity is representative of an existing capacity plus an augmented capacity minus a bandwidth of all circuits routed on said at least one link of the network;

computing an overall cost in accordance with said spare capacity for provisioning a circuit on said at least one link of the network; and

applying a benefit weight to said spare capacity, wherein said benefit weight accounts for a cost for financing said augmented capacity, wherein said benefit weight, b_j, is expressed as:

$$b_j = c_j - \alpha\, p\, n\, c_j = c_j\, (1 - \alpha\, p\, n)$$

where c_j represents a cost for a link j, where α represents an interest rate for capital per unit time, where n represents a number of capacity planning periods, and where p represents a length of said capacity planning period.

8.   (Canceled)

9.   (Currently Amended) ~~The method of claim 8~~ A method for assisting capacity planning in a network having a plurality of links, said method comprising the steps of:

determining spare capacity on at least one link of the network, where said spare capacity is representative of an existing capacity plus an augmented capacity minus a bandwidth of all circuits routed on said at least one link of the network;

computing an overall cost in accordance with said spare capacity for provisioning a circuit on said at least one link of the network; and

applying a benefit weight to said spare capacity, wherein said benefit weight accounts for a discount period, wherein said benefit weight, b_j, is expressed as:

$$b_j = c_j - \alpha\, q_j\, c_j = c_j\, (1 - \alpha\, q_j)$$

where c_j represents a cost for a link j, where α represents an interest rate for capital per unit time, and where q_i represents said discount period.

Claims 10-12 (Canceled)

13.   (Currently Amended) ~~The apparatus of claim 12~~ An apparatus for assisting capacity planning in a network having a plurality of links, comprising:

means for determining spare capacity on at least one link of the network, where said spare capacity is representative of an existing capacity plus an augmented capacity minus a bandwidth of all circuits routed on said at least one link of the network;

means for computing an overall cost in accordance with said spare capacity for provisioning a circuit on said at least one link of the network, wherein said computing means minimizes ~~an objective~~ a function of $\Sigma\, c_j\, x_j - \Sigma\, s_j\, b_j$, to obtain said overall cost, where s_j represents said spare capacity for a link j, where b_j represents said benefit weight for said link j, where x_j represents said augmented capacity for said link j, and where c_j represents a cost for said link j; and

means for applying a benefit weight to said spare capacity.

Claims 14-17 (Canceled)

18.   (Currently Amended) ~~The computer-readable medium of claim 17~~ A computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to perform the steps comprising of:

determining spare capacity on at least one link of the network, where said spare capacity is representative of an existing capacity plus an augmented capacity minus a bandwidth of all circuits routed on said at least one link of the network;

computing an overall cost in accordance with said spare capacity for provisioning a circuit on said at least one link of the network, wherein said computing step comprises:

minimizing ~~an objective~~ a function of $\Sigma\, c_j\, x_j - \Sigma\, s_j\, b_j$, to obtain said overall cost, where s_j represents said spare capacity for a link j, where b_j represents said

benefit weight for said link j, where x_j represents said augmented capacity for said link j, and where c_j represents a cost for said link j; and applying a benefit weight to said spare capacity.

19. (Canceled)

20. (Canceled)